

# Memorandum

To : Mr. Steve Yaeger  
Bay-Delta Oversight Council

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Date May 5, 1994

From : Department of Fish and Game

Subject : Review of Introduced Fish, Wildlife, and Plants in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

## Perspective

I question whether the "flavor" of this paper (introduced species vs native species) is consistent with the BDOC general objective for Biological Resources: "To improve and sustain biological resources dependent on the Estuary ecosystem" (p.2). Isn't the introduced species issue really whether uncontrolled introductions have (adversely?) affected attainment of species (some combination of native and introduced) management goals?

Thus, I suggest that you consider restructuring the paper to:

- 1) define species management goals, and
- 2) evaluate the impact of recent uncontrolled introductions on attainment of those goals.

I believe an appropriate goal is to restore a biologically diverse ecosystem which maximizes production of desirable recreational and economically important species while not jeopardizing the existence of natives.

Certainly, for several reasons, management goals should not include revitalizing native populations at the expense of all introduced species. Such a goal would be unreasonable and unrealistic. Consider: 1) the vast assemblage of introduced species already present, 2) the habitat in which the natives evolved has been greatly disrupted, 3) the recreational and economic importance of some introduced species. I seriously doubt that the "public" wants the Estuary to be overrun with splittail, chubs, suckers, hitch and squawfish at the expense of striped bass, American shad, black bass and catfish!

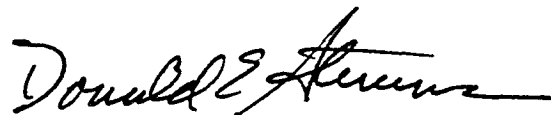
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In response to those who don't think flows and water exports are the real issue (p.2 and 3), keep in mind that for the most part native fishes have endured despite numerous more or less indiscriminate intentional introductions that have dominated the delta fish fauna for more than a century. (Thicktail chub and Sacramento perch are notable exceptions, but isn't it likely that they succumbed largely in response to the major habitat changes caused by levee construction?). Why should relatively few recent introductions be so threatening or preclude "restoration"? In contrast, contemplate that the present declines of concern are of diverse species, both native and introduced, and they have occurred concurrently with major changes in water management. Also note that these declines were anticipated before 1950 by Department of Fish and Game and U.S. Fish and Wildlife Service scientists concerned about potential impacts of the Central Valley Project. Consider why these declines have been especially severe for species with pelagic larvae or eggs and larvae that historically used the delta (which is now a water conduit) as a nursery (eg. striped bass, delta smelt, longfin smelt, splittail)!

This concludes my comments. Thank you for the opportunity to review the subject paper. If you have any questions about these comments, please contact me at 8/423-7800.



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